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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			SHEDRICK, CHARLES TERRELL	
			ART UNIT	PAPER NUMBER
			2687	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,409	HOEBEN, MAARTEN	
	Examiner	Art Unit	
	Charles Shedrick	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3,5,6,8-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giles et al. (U.S. Patent # 5,231,634) in view of Katinakis et al. (U.S. Patent # 6,389,039 B1).

Consider **claims 1 and 13**, Giles et al. clearly show and disclose a method and apparatus comprising: a receiver for receiving a first message over a first shared-communications channel (i.e., receiving from first, second or third agent) (**abstract, col. 2 line 65- col. 4 line 21**), wherein said first message comprises: (i) a notification that said first shared-communications channel has been reserved (i.e., a RTS or CTS message) (**abstract, col. 3 lines 3-22 and lines 40- line 58, col. 5 line 62 - col. 6 line 10, col. 9 lines 40-67**) (ii) one or more values that define (a) a first time interval (i.e., reservation duration) during which a channel is reserved (i.e., the time intervals are defined by the reservation durations in the frame)(**abstract, col. 3 lines 3-22, col. 3 lines 40-42, col. 5 lines 49-55, col. 6 lines 37-67, and col. 9 lines 40-67**) and (b) a second time interval (i.e., reservation duration) during which a first signal is transmitted, wherein said second time interval is after said first time interval reserved (i.e., second duration is after first duration) (**abstract, col. 3 lines 3-22, col. 3 lines 40-42, col. 5 lines 49-55, col. 6 lines 37-67, and col. 9 lines 40-67**) ; and a transmitter for transmitting, within said first time interval, a second signal over said first shared-communications channel only(i.e., transceiver is capable of transmitting during, before, or after, the reserved duration) (**col. 3 lines 3-22, lines 54-58**).

However, Giles et al. does not clearly disclose a second shared-communications channel or transmitting over the combination of said first shared-communications channel and said second shared-communications channel.

In the same field of endeavor, Katinakis et al. clearly show and disclose a second shared-communications channel and transmitting over the combination of said first shared-communications channel and said second shared-communications channel (see **abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include transmitting over the combination of said first shared-communications channel and said second shared-communications channel as taught by Katinakis et al. for the purpose of attaining higher bandwidth transmissions.

Consider **claims 2 and 14 as applied to the apparatus and method of claims 1 and 13 respectively**, Giles et al. as modified by Katinakis et al. clearly disclose wherein said first message is also received by a station that always transmits via one shared-communications channel at a time (i.e., stations contend for channel access)(**col. 3 lines 50-57**), and wherein said notification causes said station to refrain from transmitting until after said second time interval (**col. 3 lines 50-57**).

Consider **claim 3 and as applied to the apparatus of claim 1**, Giles et al. clearly disclose wherein said transmitter is also for transmitting (see **col. 3 lines 3-22 and lines 33-35**), after said second time interval, a third signal (i.e., data, cts, rts, ack) (**col. 5 line 62 col. 6 line 10. col. 7 line 52-col.8 lines 20**).

However, Giles et al. does not clearly disclose transmitting over the combination of a plurality of shared-communications channels.

In the same field of endeavor, Katinakis et al. clearly show and disclose transmitting over the combination of said first shared-communications channel and said second shared-communications channel (see **abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include transmitting over the combination of a

plurality of shared-communications channels as taught by Katinakis et al. for the purpose of attaining higher bandwidth transmissions.

Consider **claim 5** and **as applied to the apparatus of claim 1**, Giles clearly show and disclose the claimed invention except wherein said transmitter is also for, prior to receiving said first message: transmitting over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and transmitting a third signal over the combination of said plurality of shared-communications channels.

In the same field of endeavor, Katinakis et al. clearly show and disclose wherein said transmitter is also for, prior to receiving said first message (**col. 4 lines 7-25**): transmitting over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**); and transmitting a third signal over the combination of said plurality of shared-communications channels (i.e. data, voice, channeling frames, etc.) (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include prior to receiving said first message: transmitting over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and transmitting a third signal over the combination of said plurality of shared-communications channels as taught by Katinakis et al. for the purpose of reserving multiple channels for a higher bandwidth allocation.

Consider **claim 6** and **as applied to the apparatus of claim 1**, Giles et al. clearly show and disclose wherein said receiver is also for receiving, during said first time interval, a second

message (**abstract, col. 3 lines 3-22 and lines 40- line 58, col. 5 line 62- col. 6 line 10, col. 9 lines 40-67**).

However, Giles et al does not specifically disclose a second shared-communications channel associated with reserving said second shared-communications channel.

In the same field of endeavor Katinakis et al. clearly show and disclose a second shared-communications channel associated with reserving said second shared-communications channel (i.e., a plurality of channels interactively communicating) (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Giles et al. to include a second shared-communications channel (i.e., of a plurality of channels) associated with reserving said second shared-communications channel as taught by Katinakis et al. for the purpose of reserving multiple channels for a higher bandwidth allocation.

Consider **claim 8 and as applied to the apparatus of claim 1**, Giles et al as modified by Katinakis et al. clearly disclose wherein said second signal comprises a data message (**col. 4 lines 45-64, col. 6 lines 37-52**).

Consider **claims 9 and 19 and as applied to the apparatus of claim 1 and method of claim 13**, Giles et al. clearly disclose wherein said second signal comprises a reservation message for reserving said first shared-communications channel during a third time interval (i.e., receiving a reservation message during reserved state) (**col. 7 lines 65-col. 8 line 20**); and wherein said third time interval is after said second time interval (i.e., the reservation request is for channel allocation and the channel is allocated based on availability which would mean after

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the second time interval which has already been reserved in some cases)(**col. 7 lines 65-col. 8 line 20**); and wherein said transmitter is also for: transmitting, within said first time interval (i.e., see exceptions according to the state diagram) (**col. 3 lines 54-57 and also col. 7 lines 65-col. 8 line 20**); a third signal for reserving said shared-communications channel during said third time interval(**col. 3 lines 3-22, col. 3 lines 40-55, col. 5 lines 49-55, col. 6 lines 37-67, and col. 9 lines 40-67**), and transmitting, within said third time interval a fourth signal (i.e. a RTS,CTS, or ACK or data) (i.e., see exceptions according to the state diagram) (**col. 3 lines 54-57 and also col. 7 lines 65-col. 8 line 20**).

However, Giles does not disclose a signal over a second shared-communications channel and the transmitting over the combination of said first shared-communications channel and said second shared-communications channel.

In the same field of endeavor, Katinakis et al. clearly show and disclose transmitting over a signal over a second shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**) and the combination of said first shared-communications channel and said second shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include transmitting over the combination of a plurality of shared-communications channels as taught by Katinakis et al. for the purpose of attaining higher bandwidth transmissions.

Consider **claim 10** and **as applied to the apparatus of claim 9**, Giles et al. as modified by Katinakis et al. clearly disclose wherein said reservation message is also received by a station

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that always transmits via one shared-communications channel at a time (i.e., stations contend for single channel access)(**col. 3 lines 50-57**), and wherein said reservation message causes said station to refrain from transmitting until after said third time interval (**col. 3 lines 50-57**)

Consider **claims 11 and 20 and as applied to the apparatus of claim 1 and method of claim 13**, Giles et al. clearly disclose wherein said second signal comprises a reservation message for reserving said first shared-communications channel during a third time interval (i.e., receiving a reservation message during reserved state) (**col. 7 lines 65-col. 8 line 20**); and wherein said third time interval is after said second time interval (i.e., the reservation request is for channel allocation and the channel is allocated based on availability which would mean after the second time interval which has already been reserved in some cases)(**col. 7 lines 65-col. 8 line 20**); and wherein said transmitter is also for: transmitting, within said second time interval and after said first signal is transmitted (i.e., see exceptions according to the state diagram) (**col. 3 lines 54-57 and also col. 7 lines 65-col. 8 line 20**) and transmitting, within said third time interval, a fourth signal (i.e. a RTS,CTS, or ACK or data) (i.e., see exceptions according to the state diagram) (**col. 3 lines 54-57 and also col. 7 lines 65-col. 8 line 20**)

However, Giles et al. does not disclose a third signal over a second shared-communications channel.

In the same field of endeavor, Katinakis et al. clearly show and disclose transmitting over a signal over a second shared-communications channel for reserving said second shared-communications channel during said third time interval (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include transmitting over a signal over a second shared-communications channel for reserving said second shared-communications channel during said third time interval as taught by Katinakis et al. for the purpose of attaining higher bandwidth transmissions.

Consider **claim 12** and **as applied to the apparatus of claim 11**, Giles et al. as modified by Katinakis et al. clearly disclose wherein said reservation message is also received by a station that always transmits via one shared-communications channel at a time (i.e., stations contend for single channel access)(**col. 3 lines 50-57**), and wherein said reservation message causes said station to refrain from transmitting until after said third time interval (**col. 3 lines 50-57**)

Consider **claim 18** and **as applied to the method of claim 13**, Giles et al. as modified by Katinakis et al. clearly show and disclose the claimed invention further comprising: (c) executing, after (a) and prior to (b), a contention-based protocol to gain access to said first shared-communications channel (i.e., CSMA) (**col. 4 lines 5-20 and col. 6 lines 60-66**).

Consider **claim 17** and **as applied to the method of claim 13** Giles et al. clearly show and disclose the claimed invention further comprising: (c) receiving, during said first time interval, a second message over said second shared-communications channel associated with reserving said second shared-communications channel.

In the same field of endeavor, Katinakis et al. clearly show and further comprising: (c) receiving, during said first time interval, a second message over said second shared-communications channel associated with reserving said second shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. to include further comprising: (c) receiving, during said first time interval, a second message over said second shared-communications channel associated with reserving said second shared-communications channel taught by Katinakis et al. for the purpose of attaining higher bandwidth transmissions.

Claims 4,7,15, and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Giles et al.** (U.S. Patent # 5,231,634) in view of **Katinakis et al.** (U.S. Patent # 6,389,039 B1) and further in view of **Li** (U.S. Patent # 6,349,210 B1).

Consider **claim 4** and as **applied to the apparatus of claim 3**, Giles et al. as modified by Katinakis et al. clearly disclose the claim invention except wherein said transmitter is also for, prior to transmitting said third signal, transmitting sequentially over each of said plurality of shared-communications channels a respective message for reserving that shared-communications channel.

However, in the same field of endeavor, Li clearly show and disclose wherein said transmitter **12** (see **Li figure 1**) is also for, prior to transmitting said third signal, transmitting sequentially over each of said plurality of shared-communications channels a respective message for reserving that shared-communications channel (see also **Li figure 1, abstract, col. 3 lines 20-35**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. as further modified by Katinakis et al. to include transmitting sequentially over each of said plurality of shared-communications channels a

respective message for reserving that shared-communications channel for the purpose of simplifying the reception and reassembly of information.

Consider **claim 7** and **as applied to the apparatus of claim 1**, Giles et al. as modified by Katinakis et al. clearly show and disclose the claimed invention including executing a contention-based protocol prior to said transmitter transmitting said second signal over said first shared-communications channel (i.e., CSMA/CD) (**col. 4 lines 5-20 and col. 6 lines 60-66**).

However, Giles et al. as modified by Katinakis et al. does not specifically show and disclose prior to said transmitter transmitting said second signal over said first shared-communications channel except for further comprising a processor for: sending signals to said transmitter, receiving signals from said receiver.

In the same field of endeavor, Li clearly show and disclose a processor **16 and 26** (see **Li figure 1**) for: sending signals to said transmitter **12 and 22** (see **Li figure 1**), receiving signals from said receiver **14 and 24** (see **Li figure 1**)(see also **Li col. 4 lines 25-52 and col. 16 lines 8-35**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. as further modified by Katinakis et al. to include a processor for: sending signals to said transmitter receiving signals from said receiver as taught by Li for the purpose of communicating.

Consider **claim 15** and **as applied to the method of claim 13**, Giles et al. clearly show and disclose further comprising: (c) transmitting, after said second time interval (i.e., transceiver is capable of transmitting during, before, or after, the reserved duration) (**col. 3 lines 3-22, lines 54-58**).

However, Giles et al. does not show transmitting, after said second time interval sequentially over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and (d) transmitting a third signal over the combination of said plurality of shared-communications channels.

In the same filed of endeavor, Katinakis et al. clearly show and disclose transmitting, after said second time interval over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**); and (d) transmitting a third signal over the combination of said plurality of shared-communications channels (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Giles et al. to include transmitting, after said second time interval over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and (d) transmitting a third signal over the combination of said plurality of shared-communications channels as taught by Katinakis et al. for the purpose of allocation higher bandwidth channels.

However, Giles et al. as modified by Katinakis does not disclose transmitting, after said second time interval sequentially.

In the same field of endeavor, Li clearly show and disclose transmitting, after said second time interval sequentially (**see also Li figure 1, abstract, col. 3 lines 20-35**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. as further modified by Katinakis et al. to include

transmitting sequentially over each of said plurality of shared-communications channels a respective message for reserving that shared-communications channel for the purpose of simplifying the reception and reassembly of information

Consider **claim 16** and **as applied to the method of claim 13**, Giles et al clearly show and disclose further comprising: (c) transmitting, prior to receiving said first message (i.e., transceiver is capable of transmitting during, before, or after, the reserved duration) (**col. 3 lines 3-22, lines 54-58**).

However, Giles et al. does not show transmitting, after said second time interval sequentially over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and (d) transmitting a third signal over the combination of said plurality of shared-communications channels.

In the same filed of endeavor, Katinakis et al. clearly show and disclose transmitting, after said second time interval over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**); and (d) transmitting a third signal over the combination of said plurality of shared-communications channels (**see abstract, col.3 line 18-57, col. 5 lines 30-42, col. 6 lines 50-58, see also figures 2-3b**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Giles et al. to include transmitting, after said second time interval over each of a plurality of shared-communications channels a respective message for reserving that shared-communications channel; and (d) transmitting a third signal over the combination of

said plurality of shared-communications channels as taught by Katinakis et al. for the purpose of allocation higher bandwidth channels.

However, Giles et al. as modified by Katinakis does not disclose transmitting, after said second time interval sequentially.

In the same field of endeavor, Li clearly show and disclose transmitting, after said second time interval sequentially (see also Li figure 1, abstract, col. 3 lines 20-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Giles et al. as further modified by Katinakis et al. to include transmitting sequentially over each of said plurality of shared-communications channels a respective message for reserving that shared-communications channel for the purpose of simplifying the reception and reassembly of information

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Shedrick whose telephone number is (571)-272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid Lester can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Shedrick
AU 2687
November 20, 2005



NICK CORSARO
PRIMARY EXAMINER